

## **Fertility Drugs As a Risk Factor for Ovarian Cancer**

In recent decades, an increasing number of women have been treated for infertility with drugs. The possibility that the use of fertility drugs may increase the risk of ovarian cancer has prompted researchers to conduct studies to determine the long-term effects of such drugs. The results of these studies have been conflicting. Some studies have identified certain fertility drugs as increasing a woman's risk for ovarian cancer, while others have not shown any increased risk from fertility drugs.

There are several theories about factors that may increase a woman's risk of ovarian cancer. Two theories in particular have prompted researchers to examine fertility drugs as a risk factor. One theory is that an increased number of uninterrupted ovulations in a woman's lifetime increases her chance of developing ovarian cancer. This theory may explain why events that interrupt the constant cycle of ovulations, such as pregnancy, breastfeeding, and oral contraceptive use, are associated with a decreased risk of ovarian cancer. Another theory is that increased levels of certain hormones associated with ovulation (such as human chorionic gonadotropin or HCG) increase the risk of ovarian cancer. Fertility drugs can increase both the number of ovulations and the levels of hormones associated with ovulation.

An evaluation of previous studies of women who had ovarian cancer found that infertile women who used fertility drugs but still never became pregnant had a significantly increased risk

of ovarian cancer compared with women who had no history of infertility. Infertile women who used fertility drugs and became pregnant did not have a significantly increased risk for ovarian cancer. Another study found that use of the fertility drug clomiphene citrate for more than a year may increase the risk of developing ovarian tumors of low malignant potential. This type of tumor responds better to treatment than epithelial ovarian cancer, the most common type of ovarian cancer.

These studies and other recent research raise questions about whether infertile women who take fertility drugs and do not become pregnant, and women who take certain fertility drugs for extended periods of time, may be at increased risk of developing ovarian cancer. However, these links have not been proven, and more research is needed. Research is also being conducted to explore the relationship between infertility and ovarian cancer.

Women who have taken fertility drugs and who are concerned about their risk of developing ovarian cancer should discuss their previous treatment with these drugs with a gynecologist. At this time, however, there are no screening tests that are consistently accurate enough to detect ovarian cancer at an early stage when there are no symptoms. Research to identify better methods of diagnosing ovarian cancer and to evaluate currently available tests is under way.

For information about fertility drugs, write to the U.S. Food and Drug Administration, HFI-40, Rockville, MD 20857, call 1-888-INFO-FDA (1-888-463-6332), or visit the FDA Web site at <http://www.fda.gov/> on the Internet.

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### **Sources of National Cancer Institute Information**

#### **Cancer Information Service**

Toll-free: 1-800-4-CANCER (1-800-422-6237)

TTY (for deaf and hard of hearing callers): 1-800-332-8615

#### **NCI Online**

##### ***Internet***

Use <http://www.cancer.gov> to reach NCI's Web site.

##### ***CancerMail Service***

To obtain a contents list, send e-mail to [cancermail@icicc.nci.nih.gov](mailto:cancermail@icicc.nci.nih.gov) with the word "help" in the body of the message.

#### **CancerFax® fax on demand service**

Dial 301-402-5874 and listen to recorded instructions.

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